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ABSTRACT

A year of postdoctoral study included work in research methodology and in adult learning and instruction. Knowledge of research methodology was improved by course work in mathematics, mathematical statistics, experimental design, psychological scaling, logical, and philosophy of science. This knowledge was applied in the design of several studies of methods of teaching adults. Another activity was writing two proposals--one for the training of educational researchers, and another for the inservice professional training of adult education researchers. The postdoctoral year was felt to be a successful experience, primarily because of the attitude of the host institution and also because of previous intensive study of college mathematics. (RT)

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FINAL REPORT

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POSTDOCTORAL FELLOWSHIP PROGRAM IN EDUCATIONAL RESEARCH

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ACTIVITIES OF A FELLOW AND HIS IMPRESSION OF THEM

In reporting an educational experience there are many aspects that might be described to the audience for whom the report is intended. The report might include the description and judgments of worth of those aspects that were intended to occur and did; those that were intended to occur but did not; and those that were not intended to occur but did.

This report is designed to communicate the congruence between the intended and the observed aspects of my educational experience as a Postdoctoral Fellow under the National Educational Research Postdoctoral Fellowship Program for 1968 - 1969. Judgments of worth about the outcomes of this personal educational experience will be implicitly, if not explicitly, made.

Thinking back to the time when I applied for a fellowship, I had every hope that if I were appointed a Fellow, I would improve my competence as an educational researcher. Upon being appointed and upon spending a year as a Fellow, I am certain that my competence as an educational researcher has been increased. This competency is not necessarily the same competency that I had envisioned prior to my year of study, nor is it deemed less important.

It was originally intended by me that the postdoctoral year of study would result in competencies which would give me greater skill to pursue research related to adult learning and instruction. The activities during my year as a Fellow provided this for the most part. I systematically studied (especially during the first two semesters of the postdoctoral year) various topics and engaged in experiences which increased certain methodological skills for conducting research. I took formal course work in mathematics (analytic geometry, calculus, linear algebra), mathematical statistics, experimental design, psychological scaling, logic, and philosophy of science. I also read extensively in the area of educational and social program evaluation. Furthermore, the informal discussions in CIRCE Seminars and discussions with colleagues at the University of Illinois as well as the frequent visitations of outsiders to CIRCE contributed significantly to my educational experience.

The results of these formal and informal learning activities provided considerable methodological and philosophical background, but a minimum of substantive background in adult learning and instruction. As a consequence several additional activities were undertaken during the few remaining months of the fellowship experience to compensate for an apparent slighting of an original intent. One activity consisted of analyzing and writing the results of a learning experiment conducted

prior to participating as a Fellow.[1] The other was the design, conduct, analysis and write-up of an experimental study dealing with an aspect of instruction.[2] This later activity provided an opportunity to synthesize and apply many of the skills (e.g., experimental design, scaling, multivariate analysis) learned earlier in the study year.

The overall effect of these experiences provided me with a broader viewpoint of educational research. I have not only developed a taste for different styles of educational inquiry, but have also developed an appetite for studying further the influence of epistemology on educational thought and its implications for research inquiry. What has been lost to a certain extent is the desire to investigate experimentally adult learning and instruction problems which originate out of psychological writings.

A second objective that I had originally intended to achieve as part of my experience as a Fellow was the development of ideas for the training of educational researchers. These ideas have become more crystalized as a result of my experience as a Fellow. I was greatly influenced by persons such as J. Myron Atkin, Jack Easley, and Robert Stake. In fact, a planning proposal, expressing some of these ideas for graduate student training was submitted by Atkin, Stake, and myself to the Research Training Branch, USOE, for possible support.[3] In spite of the fact that the proposal was written on short notice and lacked a comprehensive treatment of our proposed activities, many of our peers in educational research around the country thought that it was a good proposal. Thus we view it as a worthy statement on the training of educational researchers quite aside from the success it will or will not have in being funded. A second proposal generated as a result of my postdoctoral experience was for the in-service professional training of

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[1]Grotelueschen, Arden. Structure and Sequence in Teaching Number Bases to Adults. Adult Education, 1970, in press.

[2]McQuarrie, Duncan and Grotelueschen, Arden. Effects of Verbal Warning Upon Misapplication of a Rule of Limited Applicability. Submitted to American Educational Research Journal for possible publication, 1969.

[3]Atkin, J. Myron, Stake, Robert E., and Grotelueschen, Arden. Planning a Program for the Training of Educational Researchers. Submitted to Bureau of Research, Training Branch, USOE, for possible funding, 1969.

adult education researchers. This proposal was also submitted to USOE for possible support.[4]

In addition to commenting on the rewarding formal and informal learning experiences that I had as a Fellow, I would also like to indicate two factors which greatly facilitated my obtaining a successful postdoctoral experience. The first facilitating factor was the preparation that I undertook the year preceding the postdoctoral year. Knowing that I wanted to ultimately get additional background in certain areas (e.g., probability) which assume prior knowledge in mathematics, I took course work in college mathematics (e.g., trigonometry, differential calculus). The laying of this groundwork proved to be extremely important for me as I began my postdoctoral year. I was "tooled up" to participate in learning activities, which without the prior background knowledge, I could not have participated in.

A second facilitating factor was CIRCE -- the place where I took the postdoctorate. In comparison to many of the other Fellows with whom I talked, I feel I had an ideal place at which to take a postdoctorate. Almost every aspect about it was ideal from having living arrangements made for myself and family prior to arriving in the community to the autonomy granted me to pursue my study objectives. The arrangements that were made prior to our arriving cannot be underestimated as an important part in my (and the family) being satisfied with the postdoctoral experience. Housing was arranged for us four months before we arrived. My daughter was enrolled in a nursery school before enrollment quotas were filled, etc.

The atmosphere and the facilities for a postdoctorate were also very satisfactory. I was provided office space in CIRCE. It was understood that I was welcome to participate in any of the on-going activities, especially if the activities seemed congruent with my study objectives or interests. I was neither coerced into participating in activities which were of prime benefit to someone else nor was I left out of the mainstream of activities. The telltale sign of my satisfaction with CIRCE is that I decided to accept a position on the CIRCE staff.

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[4]Grotelueschen, Arden. 1970 Adult Education Research Conference (AERC) Evaluation Workshop. Submitted to Bureau of Research, Training Branch, USOE, for possible funding, 1969.

To summarize briefly, if the National Educational Research Postdoctoral Fellowship Program is in need of evidence supporting its continuance, I feel that the consequences of my experience as a Fellow fully justify its continued support.